

REMARKS

In the Official Action, claims 1-21 were rejected. Claims 22-29 were previously withdrawn from further consideration by the Examiner. By this response, claims 1-21 have been amended. Claims 22-29 have been cancelled without prejudice for possible inclusion in a continuation application. Upon entry of the amendments, claims 1-21 will be pending in the present application. The Applicant respectfully requests reconsideration of the pending claims in view of the following remarks.

Rejections Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 1-21 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Applicant has amended claims 13 and 15 to address informalities noted by the Examiner, such as the improper designation of steps in claims 13 and 15. In addition, the Applicant has amended certain phrasing within claims 1-21, in particular, replacing the term “said” with “the.” Similarly, claim 6 has been amended to recite a structural example of a fiber optic probe, instead of a trade name. None of these amendments were made for reasons of patentability but, instead, simply reflect the Applicant’s desire to phrase the claims more conventionally. Furthermore, none of the amendments alter the subject matter or scope of the amended claims.

In regard to claims 1, 3, 13, and 15 the Examiner specifically stated:

Regarding claim 1, “the catalyst system suitable for the oligomerization of olefin monomer” is indefinite since it is unclear which catalysts are considered to be suitable for the process?

Regarding claim 3, “the step of adjusting the olefin oligomerization process” is indefinite since it is unclear how the oligomerization process is adjusted. In other words, applicants should recite which parameters, such as pressure, temperature, concentration, feedstock, an specified parameter are adjusted.

Regarding first step (c) of claim 13, it is unclear where or when the first measurement is carried out.

Regarding second step (c) of claim 13 and claim 15, “at least one oligomerization condition” is indefinite since it is unclear which parameters are adjusted.

The Applicant respectfully traverses this rejection. With regard to rejections for indefiniteness under 35 U.S.C. § 112, second paragraph, the Federal Circuit has stated that: “The test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification. If the claims, read in light of the specification, reasonably apprise those skilled in the art of the scope of the invention, § 112 demands no more.” *Miles Lab. Inc. v. Shandon Inc.*, 27 U.S.P.Q.2d 1123, 1126 (Fed. Cir. 1993). *See also Morton Int'l, Inc. v. Cardinal Chem. Co.*, 28 U.S.P.Q.2d 1190, 1194-95 (Fed. Cir. 1993) and *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 225 U.S.P.Q. 634, 641 (Fed. Cir. 1985).

Furthermore, the claims need only be as precise as the subject matter permits so as to reasonably apprise one skilled in the art as to their scope. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 231 U.S.P.Q. 81, 94-95 (Fed. Cir. 1986). *See also Modine Mfg. Co. v. U.S. Int'l Trade Comm'n*, 37 U.S.P.Q.2d 1609, 1617 (Fed. Cir. 1996). It is the role of the description, not the claims, to describe the invention. 1 U.S.P.Q.2d 1081, 1088 (Fed. Cir. 1986). The second paragraph of Section 112 requires only that the recited parameter be easily obtainable by one skilled in the art, not that all possible permutations or alternatives be listed in the patent, much

less the claims. *Id.* Indeed, M.P.E.P. § 2173.04 has recognized this principle and instructs that the breadth of a claim is not to be equated with indefiniteness.

Turning first to claim 1, the Examiner asserts that the phrase “catalyst system suitable for oligomerization of olefin monomers” is indefinite because it is unclear what catalysts are suitable for the process. The Applicant respectfully contends, however, that one skilled in the art would readily comprehend what a catalyst system suitable for oligomerization of olefin monomers comprises. Indeed, an individual who does not comprehend what is encompassed by the phrase in question would likely not qualify as one skilled in the art. In addition, the Applicant respectfully refers the Examiner to page 1, lines 30-33 and page 12, lines 26-33 of the application which discuss examples of suitable catalyst systems. The Applicant believes that, → when claim 1 is properly read in view of the description as a whole and the cited passages in particular, one of ordinary skill in the art will readily ascertain whether any particular catalyst system could be suitable.

Similarly, in regard to claim 3, the Examiner has indicated that the phrase “the step of → adjusting the olefin oligomerization process” is indefinite for failing to recite which parameters are adjusted. The Examiner has made a similar rejection in regard to claim 13 and claim 15, which each recite “at least one oligomerization condition.” The Applicant respectfully contends that one who is skilled in the art will understand what types of adjustments may be made to an oligomerization process in response to the referenced output signal, particularly when the claims at issue are properly read in the context of the description. See, e.g., page 6, lines 21-24 and page 13, line 29 through page 14, line 2.

Returning to claim 13, the Examiner has raised similar concerns which, as with claims 1 and 3 discussed above, appear to relate to claim breadth, not indefiniteness. In particular,

→ Examiner states that, “it is unclear where or when the first measurement is carried out.”

However, as one skilled in the art would understand upon reading the specification, particularly page 14, lines 3-7 and page 18, lines 4-11, the first measurement may be made before, during or after oligomer formation and may be carried out within the reaction zone, or in an inlet or outlet to the reaction zone, for example. This aspect of the technique is properly described *in the description* section of the application and need not comprise a recitation of the claim, as noted in the caselaw cited herein, so long as one skilled in the art would understand the claim’s scope when read in view of the description.

The Applicant believes that the Examiner’s rejections of claims 1, 3, 13, and 15 are improperly based upon the breadth, not the indefiniteness, of the claim language. In particular, the Applicant believes that one skilled in the art, upon reading the description, would readily ascertain the meaning of the passages rejected by the Examiner. In support of this position, the Applicant notes that, despite the Examiner’s position regarding the indefiniteness of claims 1, 3, 13, and 15, the Examiner has simultaneously issued an obviousness rejection of these claims. While M.P.E.P. § 2173.06 permits such simultaneous rejections in some circumstances, in those circumstances the Examiner is required to point out how the alleged indefinite language is being interpreted, which the Examiner has failed to do in the present Official Action. The Applicant considers this a strong indication that the phrases are indeed sufficiently definite and that the scope of the claims is readily ascertainable by the Examiner, as well as one of ordinary skill in

the art, and that the claims in question are instead being improperly rejected for breadth. Therefore, in view of the present amendments, the well established case law cited herein, the instruction of the M.P.E.P. to not equate breadth with indefiniteness, and the failure of the Examiner to provide a reasonable basis for why one of ordinary skill in the art would be unable to understand the scope of the claims at issue, the Applicant respectfully requests reconsideration and withdrawal of the present rejection under 35 U.S.C. §112, second paragraph.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-21 under 35 U.S.C. § 103(a) as being anticipated by U.S. 6,479,597 B1, the Long reference. Specifically, the Examiner stated:

Long discloses a polymerization process of olefins such as ethylene in the presence of a catalyst. The concentrations of reactor constituents are monitored in-situ and adjusted according to measurements which are made possible by Raman Spectroscopy (the abstract; figures 1, 2, 4, 9, 11, 12, 13, 16; col. 4, lines 10-11, 40-45, and 60-65.

Long does not disclose that the polymerization is an oligomerization which is known as a kind of polymerization producing polymers having larger product (see the entire patent for details). However, it is known that the molecular weight of the polymer depends on the degree of polymerization.

It would have been obvious to one having ordinary skill in the art who wishes to produce oligomers at the time the invention was made to have modified the Long process by selecting appropriate degree of polymerization to produce oligomers such as hexane from trimerization of ethylene to arrive at the applicants' claimed process if hexene is desired.

On column 4, lines 50-59, Long discloses that the process can be carried out in multi-reaction zones.

On column 4, line 60-65, Long discloses that hydrogen can be cofed.

Long does not disclose that resolution of the Raman equipment. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Long

process by selecting appropriate wave lengths provided that wave lengths can be used to monitor the process.

The Examiner's particular reasons regarding the manner in which the Long reference allegedly renders the claimed subject matter obvious are immaterial, because the Examiner has → not proven that the Long reference qualifies as prior art against the present application.

The Applicant recognizes that the Examiner has applied the Long reference under 35 U.S.C. § 103(a). Rather than discuss reasons why the claimed subject matter is not obvious in view of the Long reference, The Applicant has elected to respond to the rejection under 35 U.S.C. § 103(a) by showing that the effective filing date of the Long reference is not earlier than ← the effective filing date of the present application

The Applicant respectfully draws the Examiner's attention to the filing date of the present application, November 3, 2000, in view of the following discussion. The Long reference, on the other hand, was filed as a provisional on July 30, 1999. A non-provisional application serial no. → 09/627,498, now abandoned, claiming priority to the provisional application was apparently filed on July 28, 2000. Most importantly, however, the Long reference issued from a *continuation-in-part* of this non-provisional application, filed on May 3, 2002. Thus, the Examiner has asserted that the Long reference qualifies as prior art under 35 U.S.C. §§ 102(e)/103. As discussed → below, the Examiner has not carried this burden.

A continuation-in-part application is entitled to the filing date of the parent application as to all subject matter *carried over* into it from the parent application, whether for purposes of

obtaining a patent or subsequently utilizing the patent disclosure as evidence to defeat another's right to a patent. *In re Lund*, 153 U.S.P.Q. 625, 630-31 (C.C.P.A. 1967); *see also* M.P.E.P. § 2136.03.IV (relying on *In re Wertheim*, 209 U.S.P.Q. 554, (C.C.P.A. 1981)). In the *Wertheim* case, the question arises as to how far back can one extend the effective date of such a reference patent as "prior art" in a case where the patent reference is used in a rejection under 35 U.S.C. §§ 102(e)/103. *Id.* at 561. Even more specifically, the C.C.P.A. answered the following question: "What patent disclosure, or portion thereof, which has been 'carried over' through a chain of applications, may be traced back to an earlier application and given its effective date . . . to reject later filed claims under §§ 102(e)/103?" *Id.* at 561-62.

In answering this question, the *Wertheim* court recognized that Supreme Court precedent expressed the rationale behind treating U.S. applications as prior art as of their filing date under Section 102(e). The Supreme Court stated that but for the delay imposed by the Patent Office in processing the application, the disclosure would become public as of the filing date. *See Id.* 559-61 (citing *Alexander Milburn Co., v. Davis-Bournonville Co.*, 270 U.S. 390 (1926) and *Hazeltine Research, Inc. v. Brenner*, 382 U.S. 252 (1965)). The C.C.P.A. extended this reasoning to a continuation-in-part application. Because a continuation-in-part application adds new matter to the previously filed parent application, the type of new matter added must be inquired into to determine whether it is critical to the patentability of the claimed invention. *Id.* at 563. If the new matter is critical for the patentability of the claimed invention, a patent could not have issued on the earlier filed application, so the theory of patent office delay has no application for the earlier filed application. *Id.* If the PTO wishes to utilize against an applicant a part of a patent disclosure found in an application filed earlier than the date of the application which

became the patent, it must demonstrate that the earlier-filed application contains support under 35 U.S.C. §§ 112 and 120 for the invention claimed in the reference patent. *Id.* at 564. “For if a patent could not theoretically have issued the day the application was filed, it is not entitled to be used against another.” *Id.* Thus, if the subject matter set forth in any claim of the reference patent does not contain appropriate support under 35 U.S.C. §§ 112 and 120, i.e., if any claim contains the new matter added in the continuation-in-part application, the effective date of the reference is its actual filing date, not the filing date of an earlier related application. *Id.* at 565. In view of this binding precedent, the Examiner must demonstrate as part of his *prima facie* case of obviousness that none of the claims of the Long reference contain new matter, else the Long reference is only entitled to its continuation-in-part filing date of May 3, 2002.

In view of the remarks set forth above, Applicants respectfully submit that the subject matter of claims 1-21 is not anticipated by the Long reference, as the Long reference does not qualify as prior art. Accordingly, Applicants respectfully request withdrawal of the Examiner’s rejection and allowance of claims 1-21.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of claims 1-21. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

General Authorization for Extensions of Time

In accordance with 37 C.F.R. § 1.136, Applicants hereby provide a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefor. Furthermore, Applicant authorizes the Commissioner to charge the appropriate fee as well as any additional fees which may be currently due to the credit card listed on the attached PTO-2038. However, if the PTO-2038 is missing, if the amount listed thereon is insufficient, or if the amount is unable to be charged to the credit card for any other reason, the Commissioner is authorized to charge Deposit Account No. 06-1315; Order No. CPCM:0008/FLE (33938US).

Respectfully submitted,


John M. Rariden
Reg. No. P - 54,388
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545

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